

1           1. A queuing system, comprising:  
2           at least one input/output (I/O) interface having an outbound queue; and  
3           a plurality of processing units coupled to the at least one I/O interface, each one of  
4           the processing units being coupled to a corresponding processing unit memory, each one  
5           of the processing unit memories having an inbound queue for such coupled processing  
6           unit; and  
7           wherein the at least one I/O interface outbound queue stores outbound  
8           information being returned to the I/O interface after being processed by one of the  
9           processing units.

1           2. The queuing system recited in claim 1 wherein the I/O interface creates queue  
2           indices for storage in the inbound queues of the processor unit memories.

1           3. The queuing system recited in claim 2 wherein the I/O interface includes a  
2           translation table, such table storing at a location a producer index for the plurality of  
3           processing units and a consumer index for such plurality of processing units.

1           4. A queuing system comprising:  
2           a plurality of interconnected directors, each one of the directors having:  
3           an input/output interface section for receiving information from a  
4           source thereof and for returning information to interface to such source;  
5           and,  
6           a microprocessor for processing information sent thereto from a  
7           remote one of the directors, each one of the microprocessors  
8           having a CPU and a CPU memory, such CPU memory storing a  
9           queue for inbound information passed to such director for  
10          processing therein such information being sent to the remote  
11          director from an originating one of the directors; and  
12          wherein each one of the input/output sections includes a queue for  
13          outbound information being returned to the source through such originating one

14 of the directors after being processed by the microprocessor of such remote one of  
15 the directors.

1 5. The queuing system recited in claim 4 wherein each one of the directors  
2 includes a translation table, such table storing at a location thereof corresponding to each  
3 one of the remote directors a producer index for the queue of such remote director and a  
4 consumer index for such one of the remote directors.